U.S. Department of Transportation
National Highway Traffic Safety Administration
NHTSA

Traffic Safety Facts
2021 Data

DOT HS 813 466 June 2023 (Revised)

Motorcycles

In this fact sheet for 2021 the information is presented as follows.

The following definitions apply to terms in this fact sheet:

- For the purposes of this fact sheet, motorcycles include two- and three-wheeled motorcycles, off-road motorcycles, mopeds, motor scooters, minibikes, and pocket bikes.
- The **motorcycle rider** is the person operating the motorcycle; the **passenger** is a person seated on, but not operating, the motorcycle; the **motorcyclist** is a general term referring to either the rider or passenger.
- Drivers or motorcycle riders are considered to be alcohol-impaired when their blood alcohol concentrations (BACs) are .08 grams per deciliter (g/dL) or higher.

Key Findings

- In 2021 there were 5,932 motorcyclists killed, 14 percent of all traffic fatalities. This is the highest number of motorcyclists killed since FARS started data collection in 1975.
- The number of motorcyclist fatalities in 2021 increased by 8 percent from 2020, from 5,506 to 5,932.
- An estimated 82,686 motorcyclists were injured in 2021, a 5-percent increase from 78,944 motorcyclists injured in 2020.
- Per vehicle miles traveled in 2021, the fatality rate for motorcyclists (30.20) was almost 24 times the passenger car occupant fatality rate (1.26).
- Thirty-six percent of motorcycle riders involved in fatal crashes in 2021 were riding without valid motorcycle licenses.
- In 2021 motorcycle riders involved in fatal crashes had higher percentages of alcohol impairment than drivers of any other motor vehicle type (28% for motorcycles, 24% for passenger cars, 20% for light trucks, and 3% for large trucks).
- Forty-three percent of motorcycle riders who died in single-vehicle crashes in 2021 were alcohol-impaired.
- Motorcycle riders killed in traffic crashes at night were three times more frequently found to be alcohol-impaired than those killed during the day (42% and 16%) in 2021.
- In States without universal helmet laws, 55 percent of motorcyclists killed in 2021 were not wearing helmets, as compared to 9 percent in States with universal helmet laws.

This fact sheet contains information on fatal motor vehicle traffic crashes based on data from the Fatality Analysis Reporting System (FARS) and non-fatal motor vehicle traffic crashes from the National Automotive Sampling System (NASS) General Estimates System (GES) and Crash Report Sampling System (CRSS). A change instituted with the release of 2020 data is rounding estimates to the nearest whole number instead of the nearest thousand for all police-reported crashes, including injury estimates. Refer to the end of this publication for more information on FARS, NASS GES, and CRSS.

Due to a vehicle classification change, the 2020 and later-year vehicle type classifications are not comparable to 2019 and earlier-year vehicle type classifications. This change affects any analysis with a vehicle component to it. Refer to the end of this publication for more information on Product Information Catalog and Vehicle Listing (vPIC).

A motor vehicle traffic crash is defined as an incident that involved one or more motor vehicles in-transport that originated on or had a harmful event (injury or damage) on a public trafficway, such as a road or highway. Crashes that occurred on private property not regularly used by the public for transport, including some parts of parking lots and driveways, are excluded. The terms “motor vehicle traffic crash” and “traffic crash” are used interchangeably in this document.

Overview

In 2021:

- There were 5,932 motorcyclists killed in motor vehicle traffic crashes – higher than the 5,506 motorcyclists killed in 2020 and the highest number of motorcyclists killed since FARS started data collection in 1975.
- Motorcyclists accounted for 14 percent of all traffic fatalities and 17 percent of all motor vehicle occupant (driver and passenger) fatalities.
- Of the 5,932 motorcyclists killed in traffic crashes, 95 percent (5,636) were riders and 5 percent (296) were passengers.
- There were an estimated 82,686 motorcyclists injured, a 5-percent increase from 78,944 motorcyclists injured in 2020.

Table 1 presents information about motorcyclists killed and injured from 2012 to 2021. From 2020 to 2021 motorcyclist fatalities increased by 8 percent. The number of registered motorcycles and motorcycle vehicle miles traveled (VMT) are also presented in Table 1, along with the respective fatality and injury rates.

Table 1. Motorcyclists Killed and Injured, and Fatality and Injury Rates, 2012–2021

Year	Killed	Registered Vehicles	Fatality Rate per 100,000 Registered Vehicles	VMT (millions)	Fatality Rate per 100 Million VMT
2012	4,986	8,454,939	58.97	21,385	23.32
2013	4,692	8,404,687	55.83	20,366	23.04
2014	4,594	8,417,718	54.58	19,970	23.00
2015	5,029	8,600,936	58.47	19,606	25.65
2016	5,337	8,679,380	61.49	20,445	26.10
2017	5,226	8,664,108	60.32	20,149	25.94
2018	5,038	8,659,741	58.18	20,076	25.09
2019	5,044	8,596,314	58.68	19,688	25.62
2020	5,506	8,347,435	65.96	17,947	30.68
2021	5,932	9,881,414	60.03	19,642	30.20

Year	Injured	Registered Vehicles	Injury Rate per 100,000 Registered Vehicles	VMT (millions)	Injury Rate per 100 Million VMT
2012	93,251	8,454,939	1,103	21,385	436
2013	88,760	8,404,687	1,056	20,366	436
2014	91,987	8,417,718	1,093	19,970	461
2015	88,738	8,600,936	1,032	19,606	453
2016†	104,442	8,679,380	1,203	20,445	511
2017†	88,592	8,664,108	1,023	20,149	440
2018†	81,859	8,659,741	945	20,076	408
2019†	83,814	8,596,314	975	19,688	426
2020†	78,944	8,347,435	946	17,947	440
2021†	82,686	9,881,414	837	19,642	421

Sources: FARS 2012-2020 Final File, 2021 Annual Report File (ARF); NASS GES 2012-2015; CRSS 2016-2021; VMT and Registered Vehicles – Federal Highway Administration (FHWA)
†CRSS estimates and NASS GES estimates are not comparable due to different sample designs. Refer to end of document for more information about CRSS.
Note: Due to a vehicle classification change, the 2020 and later year data are not comparable to 2019 and earlier years.

Motorcycles made up 3.5 percent of all registered vehicles in the United States in 2021 and accounted for only 0.6 percent of all VMT. Per 100,000 registered vehicles in 2021, the fatality rate for motorcyclists (60.03) was nearly 5 times the fatality rate for passenger car occupants (12.53) and 8 times the fatality rate for light-truck occupants (7.52), as shown in Table 2. The injury rate for motorcyclists (837) was lower than the injury rate for passenger car occupants (1,027), but higher than the injury rate of light-truck occupants (578).

Per 100 million VMT in 2021, the fatality rate for motorcyclists (30.20) was almost 24 times the passenger car occupant fatality rate (1.26) and 40 times the fatality rate for light-truck occupants (0.76). The motorcyclist injury rate (421) was 4 times the injury rate of passenger car occupants (103) and 7 times the injury rate of light-truck occupants (58).

Table 2. Occupant* Fatality and Injury Rates, by Vehicle Type, 2020 and 2021

Rate		Vehicle Type					
		Motorcycles		Passenger Cars		Light Trucks	
		Fatality Rate	Injury Rate	Fatality Rate	Injury Rate	Fatality Rate	Injury Rate
2020	Per 100,000 Registered Vehicles	65.96	946	11.42	924	6.87	539
	Per 100 Million VMT	30.68	440	1.22	99	0.73	58
2021	Per 100,000 Registered Vehicles	60.03	837	12.53	1,027	7.52	578
	Per 100 Million VMT	30.20	421	1.26	103	0.76	58

Sources: FARS 2020 Final File, 2021 ARF; CRSS 2020–2021; Registered Motorcycles and Motorcycle VMT– FHWA; Registered Passenger Cars and Light Trucks – Polk data from S&P Global Mobility, Copyright © R.L. Polk & Co.; Passenger Car and Light-Truck VMT – FHWA, revised by NHTSA
*Includes both riders/drivers and passengers.

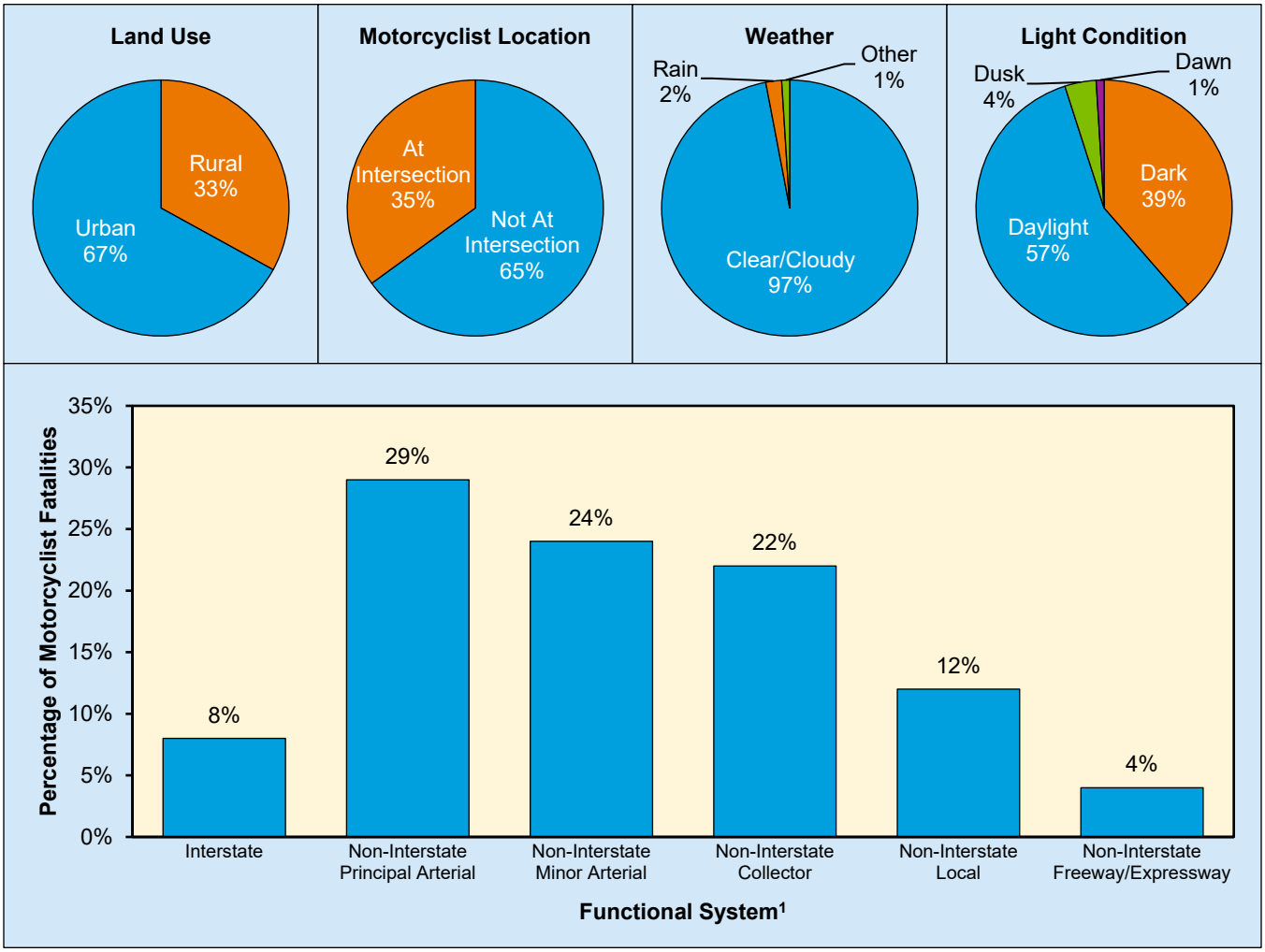
Crash Characteristics

Figure 1 displays information about the environment surrounding the motorcyclist fatalities in 2021 including land use, motorcyclist location, light condition, weather, and functional system. In 2021 (based on known values):

- 67 percent of the motorcycle fatalities occurred in urban areas compared to 33 percent in rural areas;
- 65 percent occurred at locations that were not intersections compared to 35 percent at intersections;
- 97 percent occurred in clear/cloudy conditions compared to 2 percent in rain conditions and 1 percent in snow/sleet, fog, or other conditions;

- 57 percent occurred during daylight compared to 39 percent in the dark, 4 percent during dusk, and 1 percent during dawn; and
- 92 percent occurred on non-interstate roads compared to 8 percent on interstates.

Figure 1. Motorcyclist Fatalities in Relation to Land Use, Motorcyclist Location, Weather, Light Condition, and Functional System[1], 2021



Source: FARS 2021 ARF
Notes: Unknowns were removed before calculating percentages. Percentages may not add up to 100 percent due to independent rounding.

Crash Involvement

The most harmful events in 2021 for 3,471 (57%) of the 6,082 motorcycles involved in fatal crashes were collisions with motor vehicles in transport.

In two-vehicle crashes, 75 percent of the motorcycles involved in fatal crashes were struck in the front. Only 8 percent were struck in the rear.

Motorcycles were more frequently involved in fatal collisions with fixed objects than other vehicle types. Twenty-four percent of motorcycles involved in fatal crashes in 2021 collided with fixed objects, compared to 17 percent for passenger cars, 12 percent for light trucks, and 4 percent for large trucks.

[1] Definitions for the different functional system can be found at www.fhwa.dot.gov/planning/processes/statewide/related/highway_functional_classifications/fcauab.pdf

In 2021 there were 3,052 fatal two-vehicle crashes each involving a motorcycle and another type of vehicle. In 43 percent (1,315) of these crashes, the other vehicles were turning left while the motorcycles were going straight, passing, or overtaking other vehicles. Both vehicles were going straight in 640 crashes (21%).

Motorcyclists

Age

From 2020 to 2021 motorcyclist fatalities among the 15-to-20 age group increased by 35 percent, from 218 to 294. Motorcyclist fatalities in the 40-to-44 age group increased 23 percent from 432 in 2020 to 531 in 2021. In 2021 the average age of motorcycle riders killed in traffic crashes was 43.

Weekday is defined as Monday 6 a.m. to Friday 5:59 p.m. and weekend is defined as Friday 6 p.m. to Monday 5:59 a.m. Table 3 shows that in 2020 and 2021 roughly half the motorcyclists were killed in traffic crashes during the weekend versus weekday. Additionally, motorcyclist fatalities on weekdays have increased by 11 percent from 2,736 in 2020 to 3,039 in 2021.

Table 3. Motorcyclist Fatalities, by Age Group and Day of Week, 2020 and 2021

	2020			2021		
Age Group	Weekday	Weekend	Total*	Weekday	Weekend	Total*
<15	7	6	13	6	5	11
15-20	119	99	218	179	115	294
21-24	270	219	489	267	204	472
25-29	337	357	695	384	309	693
30-34	330	350	680	363	337	700
35-39	235	251	487	271	296	568
40-44	218	213	432	248	280	531
45-49	223	264	488	264	271	535
50-54	221	281	505	255	296	552
55-59	270	263	534	255	281	537
60-64	202	225	427	219	213	433
65+	302	231	533	328	270	598
Total*	**2,736**	**2,762**	**5,506**	**3,039**	**2,885**	**5,932**

Source: FARS 2020 Final File, 2021 ARF
Weekday — Monday 6 a.m. to Friday 5:59 p.m. (4.5 days)
Weekend — Friday 6 p.m. to Monday 5:59 a.m. (2.5 days)
*Includes unknown age and unknown day of week.

Motorcycle Engine Size

Table 4 presents motorcyclist fatalities by the engine size (displacement) of the motorcycles from 2020 to 2021. Of the motorcyclists killed in traffic crashes in 2021, there were 35 percent riding on motorcycles with engine sizes of 501 to 1,000 cubic centimeters (cc), followed by 27 percent on motorcycles with engine sizes of 1,501 cc or higher, 23 percent on motorcycles with engine sizes of 1,001 to 1,500 cc, and 8 percent on motorcycles with engine sizes up to 500 cc.

The number of motorcyclist fatalities on motorcycles with engine sizes up to 500 cc increased by 10 percent (from 429 to 470) during this time, while the motorcyclist fatalities on motorcycles with engine sizes from 501 to 1,000 cc increased by 8 percent (from 1,942 to 2,088). Motorcyclist fatalities on motorcycles with engine sizes from 1,001 to 1,500 cc increased by 8 percent (from 1,263 to 1,361), while the number of motorcyclists killed on motorcycles with engine sizes 1,501 cc or higher increased by 12 percent (from 1,427 to 1,602).

Table 4. Motorcyclist Fatalities, by Engine Size* (cc), 2020–2021

Year	Engine Size (cc)										Total	
	Up to 500		501–1,000		1,001–1,500		1,501 & Higher		Unknown			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
2020	429	8%	1,942	35%	1,263	23%	1,427	26%	445	8%	5,506	100%
2021	470	8%	2,088	35%	1,361	23%	1,602	27%	411	7%	5,932	100%

Source: FARS 2020 Final File, 2021 ARF
*Based on data from NHTSA's Product Information Catalog and Vehicle Listing (vPIC).
Notes: Other motorcycle characteristics beside engine size (displacement) influence power and speed capability. NHTSA has not determined that there is a causal relationship between displacement and fatality risk.

Speeding

NHTSA considers a crash to be speeding-related if the driver was charged with a speeding-related offense or if an investigating police officer indicated that racing, driving too fast for conditions, or exceeding the posted speed limit was a contributing factor in the crash. Thirty-three percent of all motorcycle riders involved in fatal crashes in 2021 were speeding, compared to 22 percent for passenger car drivers, 15 percent for light-truck drivers, and 7 percent for large-truck drivers. As shown in Table 5, motorcycle riders 21 to 24 years old involved in fatal crashes had the highest speeding involvement at 49 percent.

Table 5. Motorcycle Riders Involved in Fatal Crashes, by Age Group and Speeding Involvement, 2021

Age Group	Speeding Involvement				Total	
	Speeding		Not Speeding			
	Number	Percent	Number	Percent	Number	Percent
<15	1	20%	4	80%	5	100%
15-20	127	43%	165	57%	292	100%
21-24	240	49%	248	51%	488	100%
25-29	333	46%	388	54%	721	100%
30-34	317	44%	406	56%	723	100%
35-39	226	38%	366	62%	592	100%
40-44	173	32%	361	68%	534	100%
45-49	174	32%	377	68%	551	100%
50-54	160	28%	421	72%	581	100%
55-59	122	22%	423	78%	545	100%
60-64	75	17%	367	83%	442	100%
65+	77	13%	515	87%	592	100%
Total*	**2,026**	**33%**	**4,054**	**67%**	**6,080**	**100%**

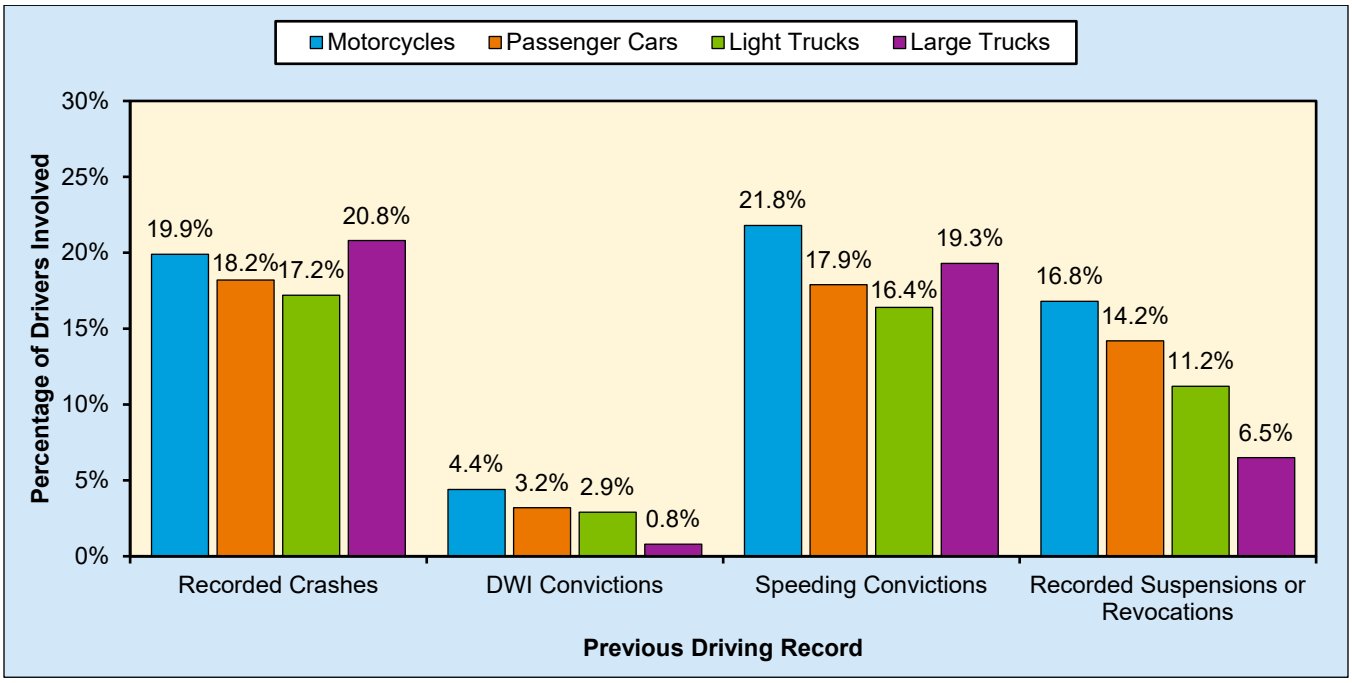
Source: FARS 2021 ARF
*Includes unknown age.

Licensing and Previous Driving Records

Thirty-six percent of motorcycle riders involved in fatal crashes in 2021 were riding without valid motorcycle licenses at the time of the crashes, while only 17 percent of passenger vehicle (passenger cars and light trucks) drivers in fatal crashes did not have valid licenses. A valid motorcycle license includes a rider having a valid driver license (non-CDL license status) with a motorcycle endorsement or a motorcycle-only license.

As shown in Figure 2, motorcycle riders involved in fatal crashes had the highest percentages of drivers with previous driving records as compared to other vehicle drivers. Motorcycle riders involved in fatal crashes were 1.2 times more likely than passenger car drivers to have previous license suspensions or revocations (16.8% and 14.2%, respectively). Note that FARS records drivers' previous driving records that occurred within 5 years from the crash date.

Figure 2. Percentage of Previous 5-Year Driving Records of Drivers Involved in Fatal Crashes, By Vehicle Type, 2021



Source: FARS 2021 ARF
Note: Excludes all drivers with previous records that were unknown.

Alcohol

In 2021 there were 5,636 motorcycle riders killed in traffic crashes compared to 5,199 in 2020. Of the 5,636 in 2021, there were 1,624 (29%) who were alcohol-impaired (BAC of .08 g/dL or higher). In 2020 there were 1,362 (26%) who were alcohol-impaired. There were 402 (7%) motorcycle riders killed in 2021 who had lower alcohol levels (BACs of .01 to .07 g/dL).

Motorcycle riders involved (killed or survived) in fatal crashes in 2021 had higher percentages of alcohol impairment than any other type of motor vehicle driver (28% for motorcycle riders, 24% for passenger car drivers, 20% for light-truck drivers, and 3% for large-truck drivers).

In 2021 the highest percentages of alcohol-impaired motorcycle rider fatalities were in the 35-to-39 and 40-to-44 age groups (35% each) followed by the 30-to-34 and 50-to-54 age groups (33% each), 45-to-49 age group (32%) and 25-to-29 age group (30%), when compared to other age groups.

Forty-three percent of the 2,170 motorcycle riders who died in single-vehicle crashes in 2021 were alcohol-impaired as compared to 20 percent of the 3,466 motorcycle riders who died in multiple-vehicle crashes, as shown in Table 6. Forty-six percent of those killed in single-vehicle crashes on weekends in 2021 were alcohol-impaired compared to 43 percent in 2020.

Table 6. Alcohol-Impaired Motorcycle Riders Killed, by Crash Type and Day of Week, 2020 and 2021

Crash Type and Day of Week		2020			2021		
		Total Motorcycle Riders Killed	Alcohol-Impaired		Total Motorcycle Riders Killed	Alcohol-Impaired	
			Number	Percent		Number	Percent
Single-Vehicle	Weekday	945	304	32%	968	377	39%
	Weekend	1,175	506	43%	1,197	552	46%
	Total*	**2,124**	**812**	**38%**	**2,170**	**931**	**43%**
Multiple-Vehicle	Weekday	1,668	225	13%	1,953	325	17%
	Weekend	1,405	325	23%	1,511	368	24%
	Total*	**3,075**	**550**	**18%**	**3,466**	**693**	**20%**
Total	Weekday	2,613	528	20%	2,921	701	24%
	Weekend	2,580	831	32%	2,708	920	34%
	Total*	**5,199**	**1,362**	**26%**	**5,636**	**1,624**	**29%**

Source: FARS 2020 Final File, 2021 ARF
Weekday — Monday 6 a.m. to Friday 5:59 p.m. (4.5 days)
Weekend — Friday 6 p.m. to Monday 5:59 a.m. (2.5 days)
*Includes riders involved in fatal crashes when day of week was unknown.
Notes: Percentages are computed based on unrounded estimates. NHTSA estimates BACs when alcohol test results are unknown.

Motorcycle riders killed in traffic crashes at night were three times more frequently alcohol-impaired than those killed during the day (42% and 16%).

The reported helmet use rate for alcohol-impaired motorcycle riders killed in traffic crashes in 2021 was 52 percent as compared to 66 percent for those with no alcohol (BAC=.00 g/dL).

Helmet Use and Effectiveness

NHTSA estimates that helmets saved the lives of 1,872 motorcyclists in 2017. If all motorcyclists had worn helmets, an additional 749 lives could have been saved (latest data available).[2]

Helmets are estimated to be 37-percent effective in preventing fatalities to motorcycle riders and 41 percent for motorcycle passengers. In other words, for every 100 motorcycle riders killed in crashes while not wearing helmets, 37 of them could have been saved had all 100 worn helmets.[2]

All motorcycle helmets sold in the United States are required to meet Federal Motor Vehicle Safety Standard (FMVSS) 218, the performance standard that establishes the minimum level of protection for helmets designed for use by motorcyclists. According to results from the National Occupant Protection Use Survey (NOPUS), the overall rate of DOT-compliant motorcycle helmet use in the United States was 64.9 percent in 2021. Helmet use continued to be significantly higher in States that required all motorcyclists to be helmeted than in other States.[3]

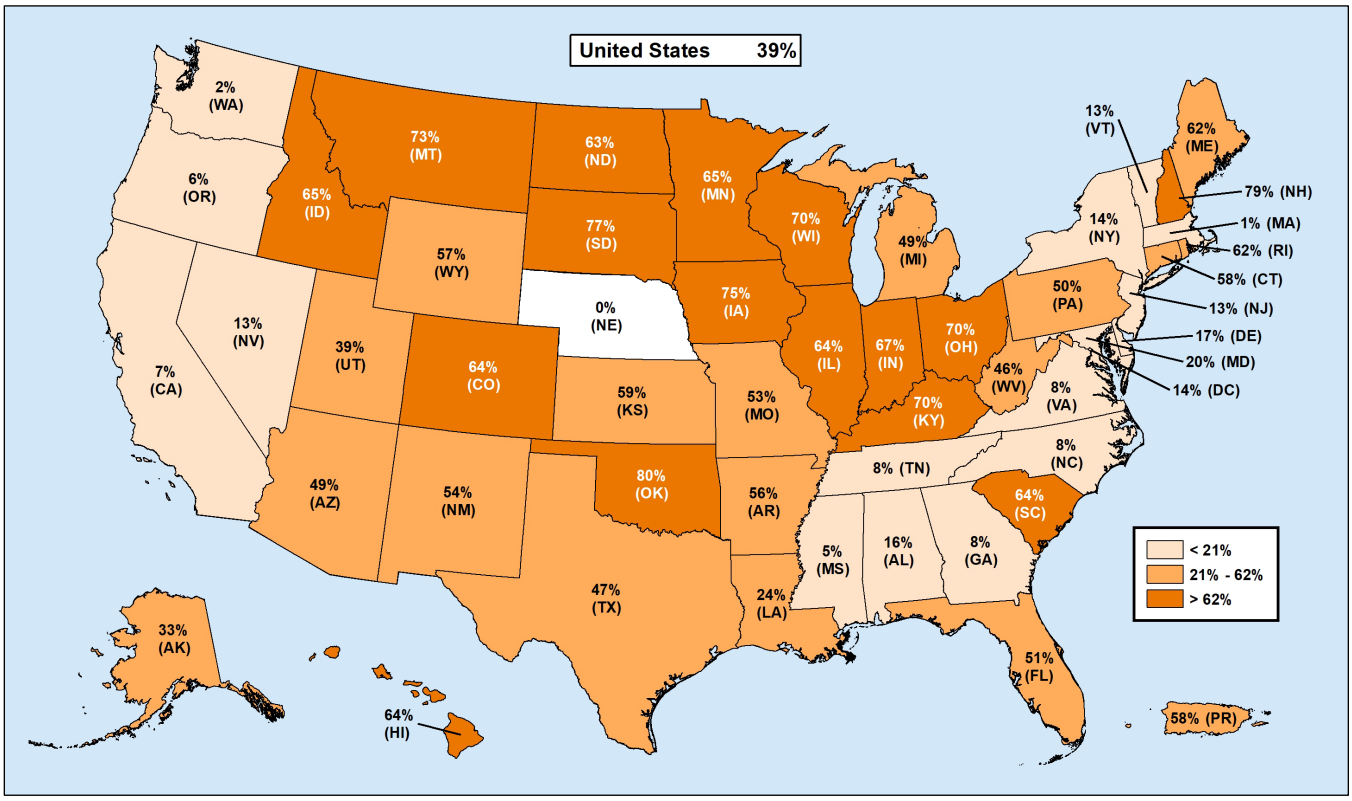
[2] National Center for Statistics and Analysis. (2019, December). *Lives and costs saved by motorcycle helmets, 2017* (Traffic Safety Facts Crash•Stats Report No. DOT HS 812 867). National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812867

[3] National Center for Statistics and Analysis. (2022, March). *Motorcycle helmet use in 2021 – Overall results* (Traffic Safety Fact Research Note. Report No. DOT HS 813 270). National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813270

State

Reported helmet use rates for motorcyclists killed in 2021 were 61 percent for riders and 47 percent for passengers, compared with 62 percent and 47 percent, respectively, in 2020. Figure 3 presents the percentage of motorcyclists killed who were not helmeted by each State in 2021, based on known helmet use.

Figure 3. Percentage of Known Unhelmeted* Motorcyclists Killed, 2021



Source: FARS 2021 ARF
*Based on known helmet use.

In 2021 only 18 States, the District of Columbia, and Puerto Rico required helmet use for all motorcyclists. Excluding the District of Columbia and Puerto Rico, the known helmet use percentages in fatal crashes ranged from 54 percent (West Virginia) to 100 percent (Nebraska) for these 18 States.

In 29 States helmet use was required for only a subset of motorcyclists (typically, motorcyclists under age 18), and 3 States (Illinois, Iowa, and New Hampshire) did not require helmet use for motorcyclists of any age. The known helmet use percentages in fatal crashes ranged from 20 percent (Oklahoma) to 83 percent (Delaware) for these 32 States.

The most current information on helmet use laws is available on the Governors Highway Safety Association (GHSA) website at www.ghsa.org/state-laws/issues/motorcyclists. In States without universal helmet laws, 55 percent of motorcyclists killed in 2021 were not wearing helmets, as compared to 9 percent in States with universal helmet laws. According to NOPUS, in 2021 DOT-compliant motorcycle helmet use in States requiring all to use helmets was 86.1 percent compared to 53.4 percent in other States.

Table 7 shows that 39 percent of the 5,932 motorcyclists killed nationwide in traffic crashes in 2021 were not helmeted, based on known helmet use. The State-level unhelmeted percentages ranged from a high of 80 percent (Oklahoma) to a low of 0 percent (Nebraska), based on known use.

Table 8 presents the percentage of motorcycle riders killed who were alcohol-impaired, by State where the crashes occurred in 2021. The percentages ranged from a low of 15 percent (South Dakota) to a high of 41 percent (Wyoming), compared to the national average of 29 percent.

Table 7. Motorcyclist Fatalities, by State and Helmet Use, 2021

State	Helmet Use						Total		Percent Based on Known Helmet Use	
	Helmeted		Unhelmeted		Unknown					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Helmeted	Unhelmeted
Alabama	62	81%	12	16%	3	4%	77	100%	84%	16%
Alaska	4	67%	2	33%	0	0%	6	100%	67%	33%
Arizona	72	48%	70	47%	8	5%	150	100%	51%	49%
Arkansas	41	43%	53	55%	2	2%	96	100%	44%	56%
California	516	91%	37	7%	12	2%	565	100%	93%	7%
Colorado	48	36%	84	62%	3	2%	135	100%	36%	64%
Connecticut	25	38%	35	54%	5	8%	65	100%	42%	58%
Delaware	19	83%	4	17%	0	0%	23	100%	83%	17%
District of Columbia	6	86%	1	14%	0	0%	7	100%	86%	14%
Florida	314	48%	328	50%	9	1%	651	100%	49%	51%
Georgia	165	89%	14	8%	6	3%	185	100%	92%	8%
Hawaii	12	36%	21	64%	0	0%	33	100%	36%	64%
Idaho	11	35%	20	65%	0	0%	31	100%	35%	65%
Illinois	62	36%	108	62%	4	2%	174	100%	36%	64%
Indiana	42	31%	86	64%	6	4%	134	100%	33%	67%
Iowa	17	25%	51	75%	0	0%	68	100%	25%	75%
Kansas	18	38%	26	55%	3	6%	47	100%	41%	59%
Kentucky	32	30%	73	70%	0	0%	105	100%	30%	70%
Louisiana	61	73%	19	23%	3	4%	83	100%	76%	24%
Maine	8	38%	13	62%	0	0%	21	100%	38%	62%
Maryland	61	79%	15	19%	1	1%	77	100%	80%	20%
Massachusetts	66	92%	1	1%	5	7%	72	100%	99%	1%
Michigan	77	44%	74	43%	23	13%	174	100%	51%	49%
Minnesota	24	35%	44	64%	1	1%	69	100%	35%	65%
Mississippi	35	92%	2	5%	1	3%	38	100%	95%	5%
Missouri	71	45%	80	51%	7	4%	158	100%	47%	53%
Montana	7	27%	19	73%	0	0%	26	100%	27%	73%
Nebraska	19	90%	0	0%	2	10%	21	100%	100%	0%
Nevada	63	72%	9	10%	15	17%	87	100%	88%	13%
New Hampshire	5	19%	19	73%	2	8%	26	100%	21%	79%
New Jersey	83	84%	12	12%	4	4%	99	100%	87%	13%
New Mexico	23	45%	27	53%	1	2%	51	100%	46%	54%
New York	181	83%	30	14%	7	3%	218	100%	86%	14%
North Carolina	209	91%	18	8%	3	1%	230	100%	92%	8%
North Dakota	3	38%	5	63%	0	0%	8	100%	38%	63%
Ohio	66	30%	154	69%	3	1%	223	100%	30%	70%
Oklahoma	15	19%	59	74%	6	8%	80	100%	20%	80%
Oregon	76	90%	5	6%	3	4%	84	100%	94%	6%
Pennsylvania	107	48%	108	49%	7	3%	222	100%	50%	50%
Rhode Island	5	38%	8	62%	0	0%	13	100%	38%	62%
South Carolina	64	36%	112	63%	1	1%	177	100%	36%	64%
South Dakota	5	23%	17	77%	0	0%	22	100%	23%	77%
Tennessee	144	87%	13	8%	9	5%	166	100%	92%	8%
Texas	266	52%	232	45%	17	3%	515	100%	53%	47%
Utah	23	59%	15	38%	1	3%	39	100%	61%	39%
Vermont	13	87%	2	13%	0	0%	15	100%	87%	13%
Virginia	100	90%	9	8%	2	2%	111	100%	92%	8%
Washington	85	94%	2	2%	3	3%	90	100%	98%	2%
West Virginia	14	52%	12	44%	1	4%	27	100%	54%	46%
Wisconsin	36	30%	83	69%	2	2%	121	100%	30%	70%
Wyoming	6	35%	8	47%	3	18%	17	100%	43%	57%
U.S. Total	**3,487**	**59%**	**2,251**	**38%**	**194**	**3%**	**5,932**	**100%**	**61%**	**39%**
Puerto Rico	28	42%	39	58%	0	0%	67	100%	42%	58%

Source: FARS 2021 ARF
Note: Shading indicates requiring helmet use for all motorcyclists.

Table 8. Motorcycle Rider Fatalities, by State and Their BACs, 2021

State	Total Fatalities	Motorcycle Rider Fatalities, by Their BACs					
				Alcohol-Impaired			
		BAC=.01+ g/dL		BAC=.08+ g/dL		BAC=.15+ g/dL	
		Number	Percent	Number	Percent	Number	Percent
Alabama	72	21	29%	17	23%	8	11%
Alaska	6	2	33%	2	33%	2	33%
Arizona	144	44	31%	37	25%	23	16%
Arkansas	93	33	36%	28	30%	16	17%
California	552	197	36%	160	29%	94	17%
Colorado	128	55	43%	43	33%	28	22%
Connecticut	64	29	45%	21	32%	14	21%
Delaware	22	5	22%	5	22%	4	16%
District of Columbia	7	4	57%	2	26%	2	23%
Florida	612	201	33%	168	27%	99	16%
Georgia	183	64	35%	49	27%	32	18%
Hawaii	32	15	46%	9	29%	6	18%
Idaho	31	12	39%	11	36%	10	32%
Illinois	163	67	41%	54	33%	37	23%
Indiana	123	40	33%	33	27%	19	15%
Iowa	64	30	47%	22	35%	12	19%
Kansas	44	11	25%	9	21%	6	14%
Kentucky	96	25	26%	19	19%	13	14%
Louisiana	81	36	44%	27	33%	17	21%
Maine	19	8	43%	5	27%	3	18%
Maryland	75	31	41%	25	33%	16	21%
Massachusetts	66	27	40%	23	34%	13	19%
Michigan	167	48	29%	38	23%	25	15%
Minnesota	67	22	33%	18	27%	11	16%
Mississippi	35	7	20%	6	17%	4	10%
Missouri	151	50	33%	42	28%	28	18%
Montana	25	11	43%	9	38%	4	17%
Nebraska	21	7	33%	6	27%	3	13%
Nevada	84	30	35%	19	22%	9	11%
New Hampshire	22	10	44%	9	39%	5	24%
New Jersey	95	32	34%	27	29%	22	23%
New Mexico	49	17	34%	13	27%	7	15%
New York	212	72	34%	58	27%	37	17%
North Carolina	212	63	30%	48	23%	26	12%
North Dakota	4	1	25%	1	25%	1	25%
Ohio	202	92	45%	70	35%	46	23%
Oklahoma	75	27	35%	22	30%	19	26%
Oregon	78	27	34%	21	27%	15	19%
Pennsylvania	211	72	34%	55	26%	32	15%
Rhode Island	13	6	46%	5	38%	4	31%
South Carolina	167	66	40%	54	32%	30	18%
South Dakota	19	5	26%	3	15%	1	6%
Tennessee	156	47	30%	34	22%	20	13%
Texas	496	206	42%	172	35%	112	23%
Utah	38	9	24%	8	21%	5	13%
Vermont	15	5	34%	5	34%	3	20%
Virginia	107	38	36%	30	28%	16	15%
Washington	85	35	41%	26	31%	15	18%
West Virginia	26	13	50%	10	39%	6	22%
Wisconsin	112	46	41%	41	36%	21	19%
Wyoming	15	6	42%	6	41%	5	30%
U.S. Total	**5,636**	**2,026**	**36%**	**1,624**	**29%**	**1,004**	**18%**
Puerto Rico	65	32	49%	22	34%	14	22%

Source: FARS 2021 ARF
Notes: Percentages are computed based on unrounded estimates. NHTSA estimates BACs when alcohol test results are unknown.

Important Safety Reminders

For Motorcyclists:

- Wearing a helmet is the single most effective way to protect yourself from a head injury. Use a motorcycle helmet for every ride, and ensure your passengers also use a helmet.
- Make sure your helmet has a valid U.S. Department of Transportation (DOT) label; the label means the helmet meets the Federal Motor Vehicle Safety Standards – this is also known as the FMVSS 218 standard. Novelty helmets without this label may not meet the same standard and will not provide the best protection needed in a crash.

- Check the fit of your helmet to ensure optimal protection.
- Wear protective gear like a sturdy jacket, pants, boots, and gloves; safety gear provide protection in case of falls or crashes, and improves comfort during the ride.
- Make yourself visible by using high-visibility colors and retro-reflective materials to maximize the ability of drivers to see you.
- Motorcycle riding requires full attention, skill, and coordination. Avoid combining riding with drinking alcohol or using other impairing drugs.

For Drivers:

- Always be on the look-out for motorcyclists.
- A motorcycle's smaller size means it can be hidden in your vehicle's blind spot.
- A motorcycle's size and narrow profile can make it difficult to judge its distance and speed. Take extra care when judging when to turn or merge.
- Keep a safe distance from the motorcycle in front of you; motorcyclists can slow their motorcycles by downshifting instead of using their brakes. This means the brake lights won't come on.
- Remember that motorcyclists sometimes change positions in their lane to avoid debris on the road.

— NHTSA's Research and Program Development

Fatality Analysis Reporting System

FARS contains data on every fatal motor vehicle traffic crash within the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a traffic crash must involve a motor vehicle traveling on a trafficway customarily open to the public, and must result in the death of a vehicle occupant or a nonoccupant within 30 days of the crash. The Annual Report File (ARF) is the FARS data file associated with the most recent available year, which is subject to change when it is finalized the following year to the final version known as the Final File. The additional time between the ARF and the Final File provides the opportunity for submission of important variable data requiring outside sources, which may lead to changes in the final counts. More information on FARS can be found at www.nhtsa.gov/crash-data-systems/fatality-analysis-reporting-system.

The updated final counts for the previous data year will be reflected with the release of the recent year's ARF. For example, along with the release of the 2021 ARF, the 2020 Final File was released to replace the 2020 ARF. The final fatality count in motor vehicle traffic crashes for 2020 was 39,007, which was updated from 38,824 in the 2020 ARF. The number of motorcycle fatalities from the 2020 Final File was 5,506, which was updated from 5,579 from the 2020 ARF.

Crash Report Sampling System

NHTSA's National Center for Statistics and Analysis (NCSA) redesigned the nationally representative sample of police-reported traffic crashes, which estimates the number of police-reported injury and property-damage-only crashes in the United States. CRSS replaced the National Automotive Sampling System (NASS) General Estimates System (GES) in 2016. More information on CRSS can be found at www.nhtsa.gov/crash-data-systems/crash-report-sampling-system-crss.

Product Information Catalog and Vehicle Listing (vPIC) Vehicle Classification

Historically, vehicle type classifications (e.g., passenger cars, light trucks, large trucks, motorcycles, buses) from FARS, NASS GES, and CRSS used for analysis and data reporting were based on analyst-coded vehicle body type. NHTSA did not have manufacturer authoritative data to assist in vehicle body type coding. NCSA has developed a Product Information Catalog and Vehicle Listing (vPIC) dataset that is being used to decode VINs (Vehicle Identification Numbers) and extract vehicle information. Details of vehicles (make, model, body class, etc.) involved in crashes are obtained from vPIC via VIN-linkage. The VIN-derived information from vPIC uses the manufacturer's classification of body class, which allows for more accurate vehicle type analysis.

The vPIC-based analysis data are available beginning with 2020 FARS and CRSS data files. Starting with the release of 2021 FARS and CRSS data, all vehicle-related analysis for 2020 and later years will be based on vPIC vehicle classification. As a result, the 2020 and later-year vehicle type classifications are not comparable to 2019 and earlier-year vehicle type classifications. This change affects any analysis with a vehicle component to it. More information on vPIC can be found at https://vpic.nhtsa.dot.gov/.

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For More Information:

Motor vehicle traffic crash data are available from the National Center for Statistics and Analysis (NCSA), NSA-230. NCSA can be contacted at NCSARequests@dot.gov or 800-934-8517. NCSA programs can be found at www.nhtsa.gov/data. To report a motor vehicle safety-related problem or to inquire about safety information, contact the Vehicle Safety Hotline at 888-327-4236 or www.nhtsa.gov/report-a-safety-problem.

The following data tools and resources can be found at https://cdan.nhtsa.gov/.

- Fatal Motor Vehicle Traffic Crash Data Visualizations
- Motor Vehicle Traffic Crash Databook
- Fatality and Injury Reporting System Tool (FIRST)
- State Traffic Safety Information (STSI)
- Traffic Safety Facts Annual Report Tables
- FARS Data Tables (FARS Encyclopedia)
- Crash Viewer
- Product Information Catalog and Vehicle Listing (vPIC)
- FARS, NASS GES, CRSS, NASS Crashworthiness Data System (CDS), and Crash Investigation Sampling System (CISS) data can be downloaded for further analysis.

Other fact sheets available from NCSA:

- Alcohol-Impaired Driving
- Bicyclists and Other Cyclists
- Children
- Large Trucks
- Occupant Protection in Passenger Vehicles
- Older Population
- Passenger Vehicles
- Pedestrians
- Rural/Urban Comparison of Motor Vehicle Traffic Fatalities
- School-Transportation-Related Crashes
- Speeding
- State Alcohol-Impaired-Driving Estimates
- State Traffic Data
- Summary of Motor Vehicle Traffic Crashes
- Young Drivers

Detailed data on motor vehicle traffic crashes are published annually in *Traffic Safety Facts: A Compilation of Motor Vehicle Traffic Crash Data*. The fact sheets and Traffic Safety Facts annual report can be found at https://crashstats.nhtsa.dot.gov/.

U.S. Department of Transportation
National Highway Traffic Safety Administration